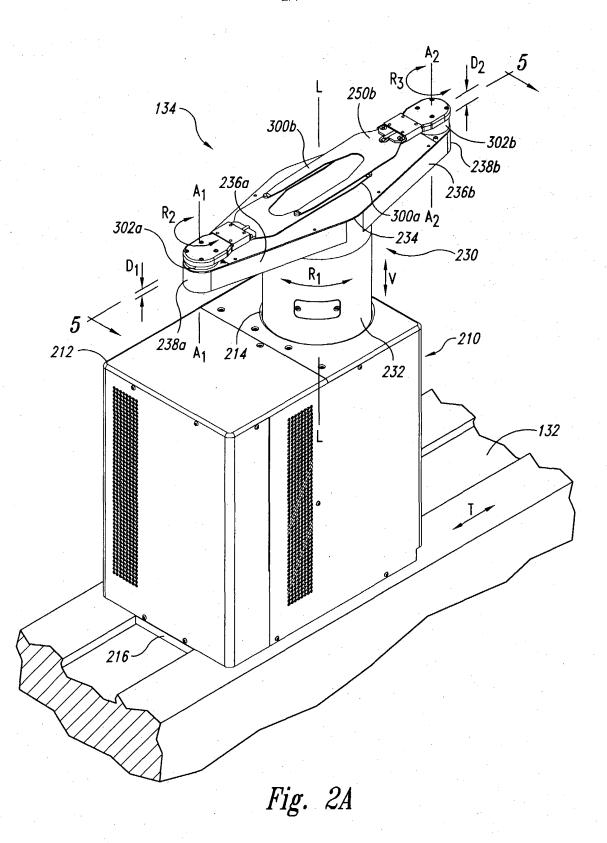
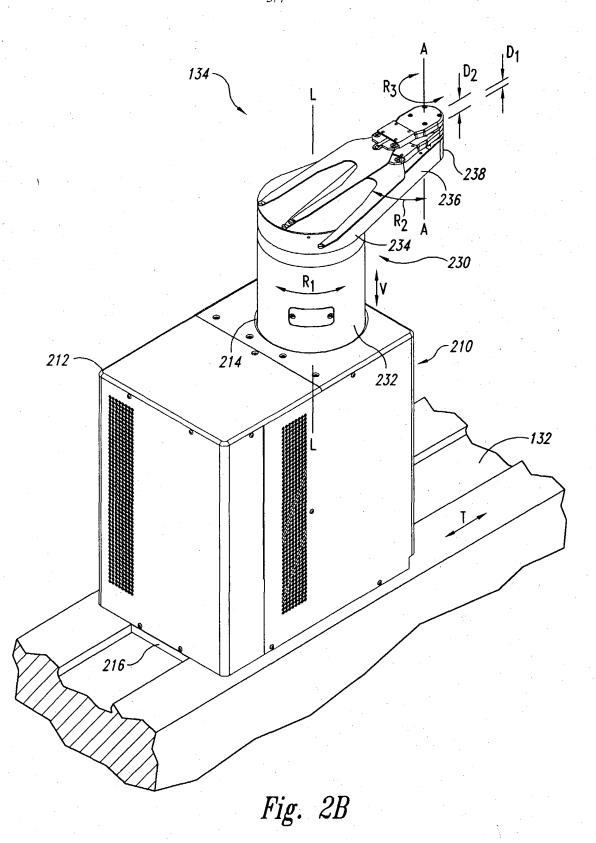
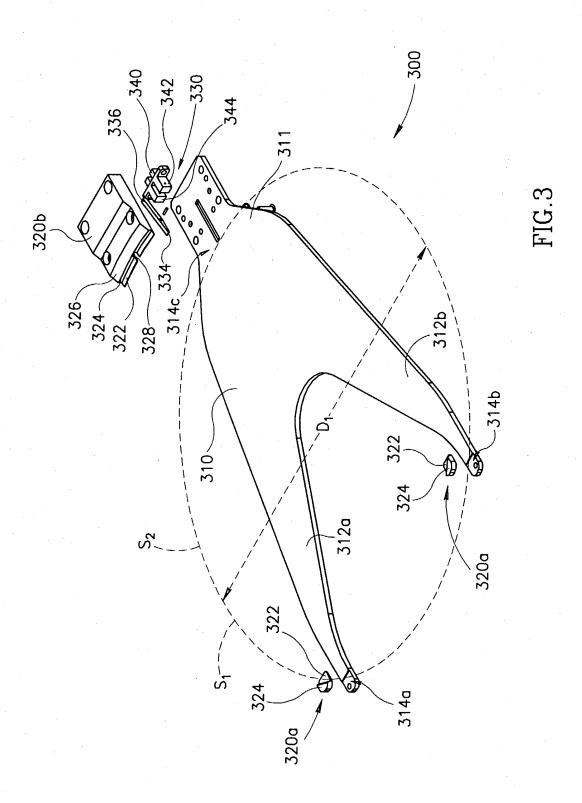


Fig. 1

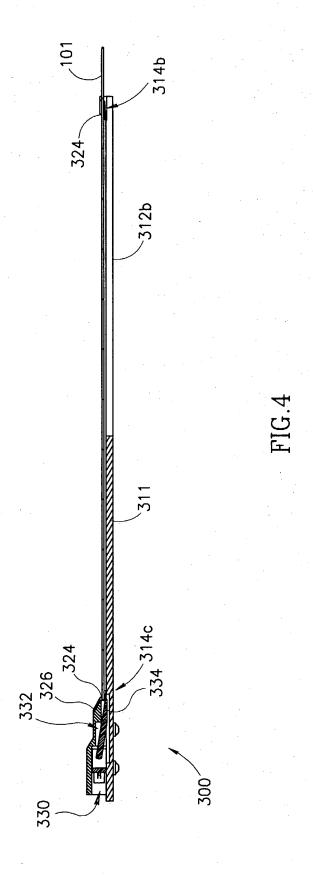






Inventors: Daniel J. Woodruff et al. Docket No.: 29195-8221US1 Title: END-EFFECTORS AND TRANSFER DEVICES FOR HANDLING

MICROELECTRONIC WORKPIECES



Inventors: Daniel J. Woodruff et al. Docket No.: 29195-8221US1 Title: END-EFFECTORS AND TRANSFER DEVICES FOR HANDLING

MICROELECTRONIC WORKPIECES

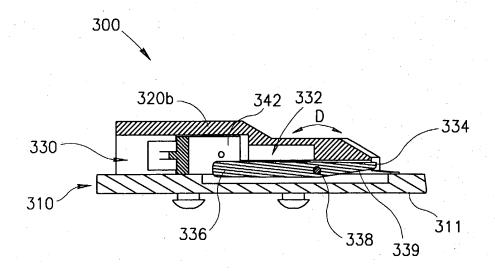


FIG.5A

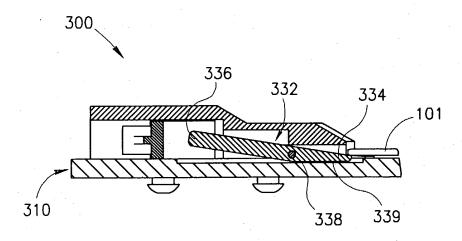


FIG.5B

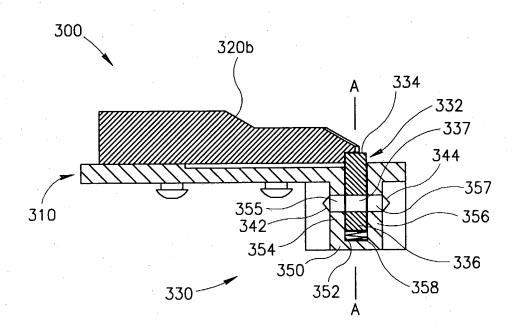


FIG.6